

FIG. 1

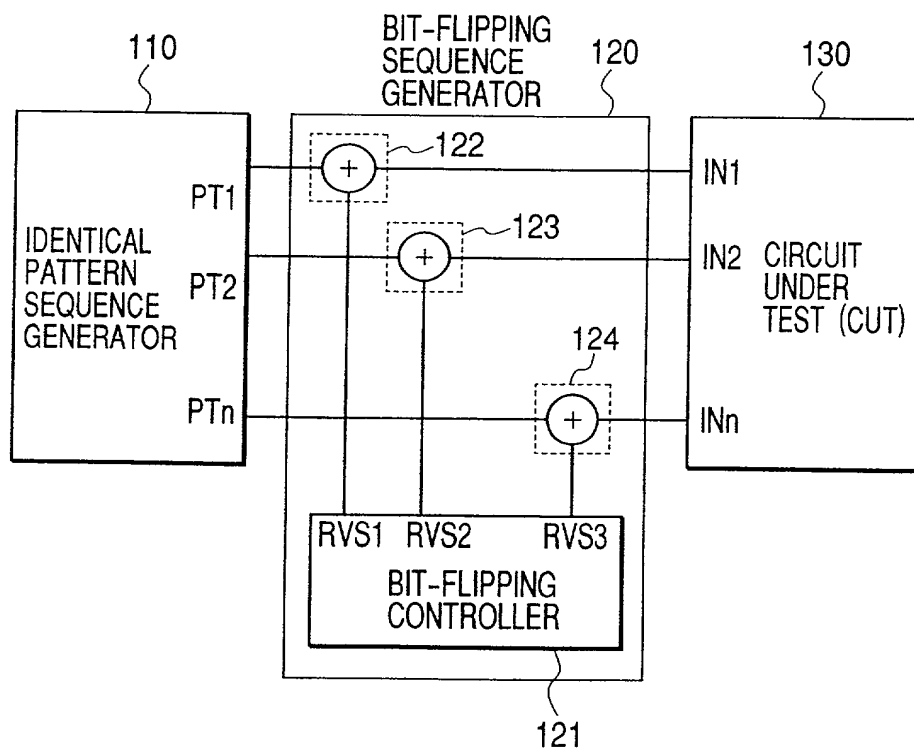


FIG. 2(a)

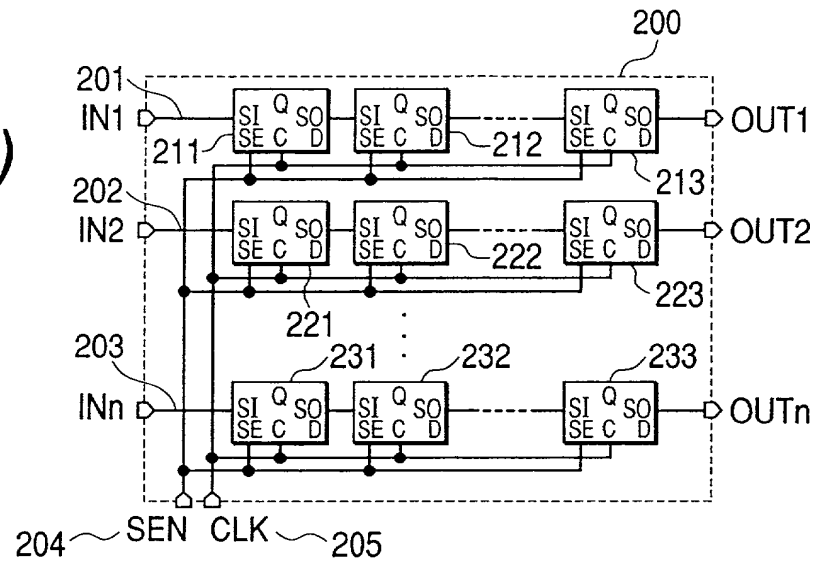


FIG. 2(b)

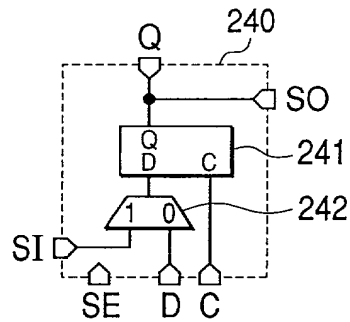


FIG. 2(c)

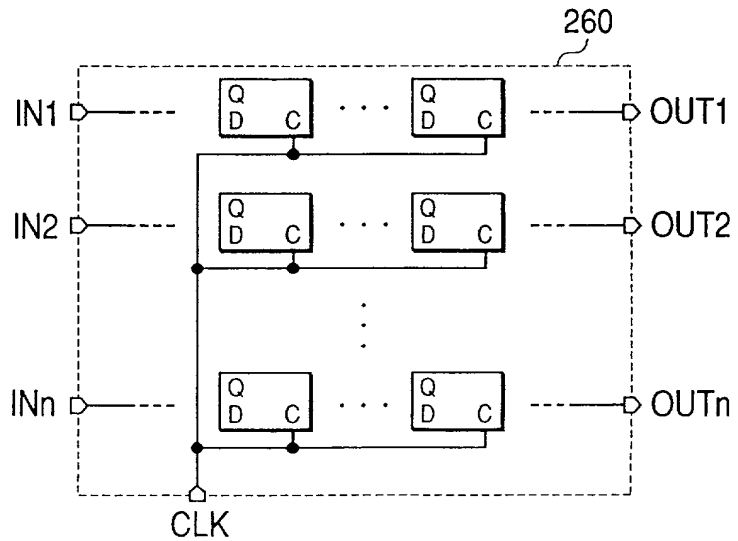


FIG. 3

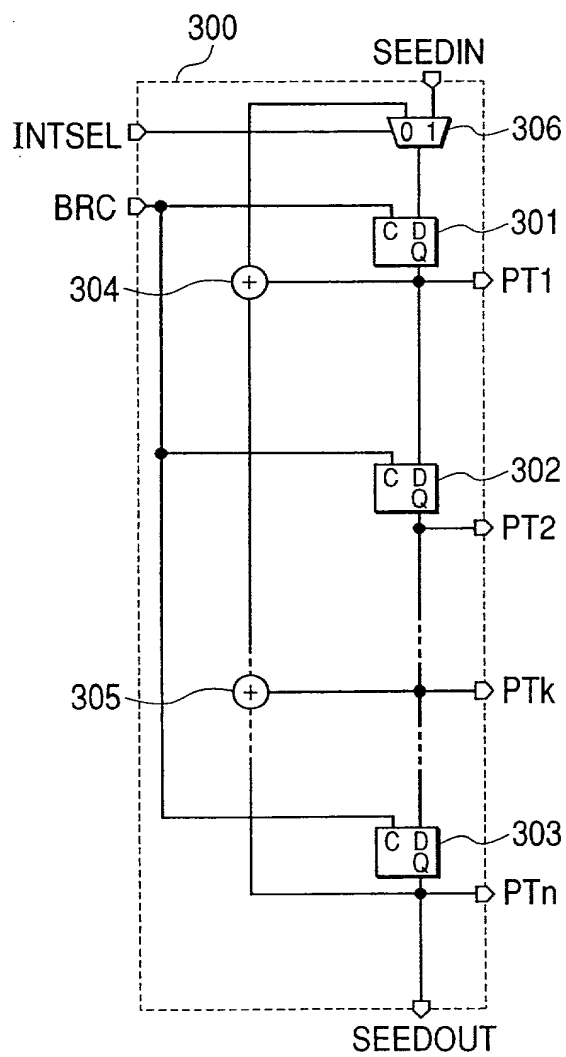


FIG. 4

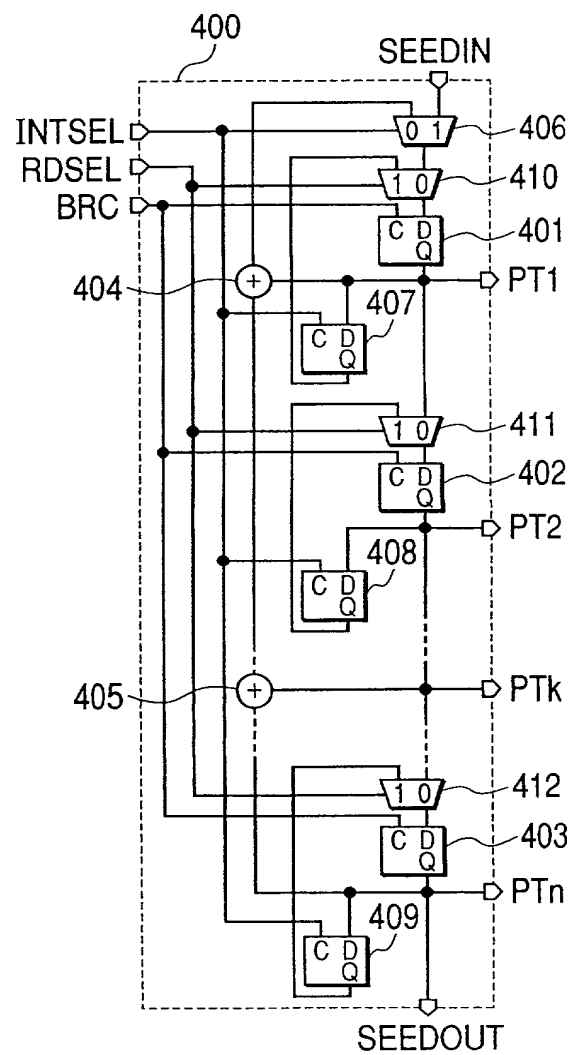


FIG. 5

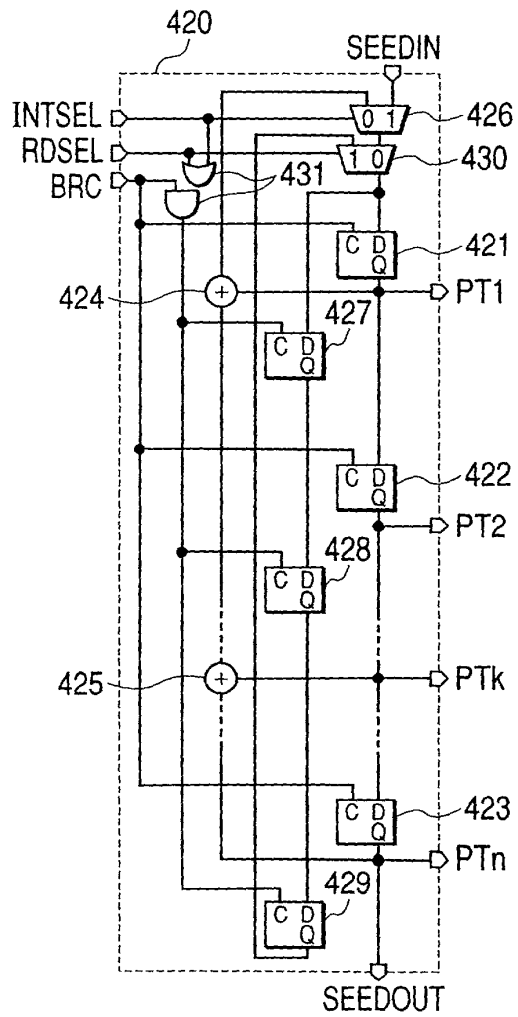


FIG. 6

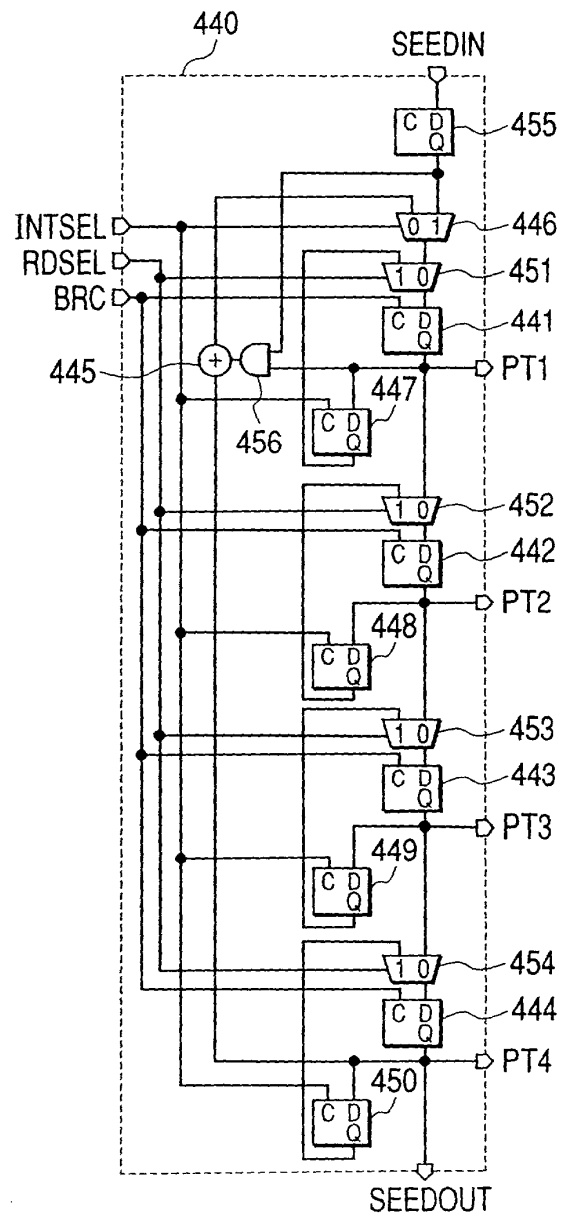


FIG. 7

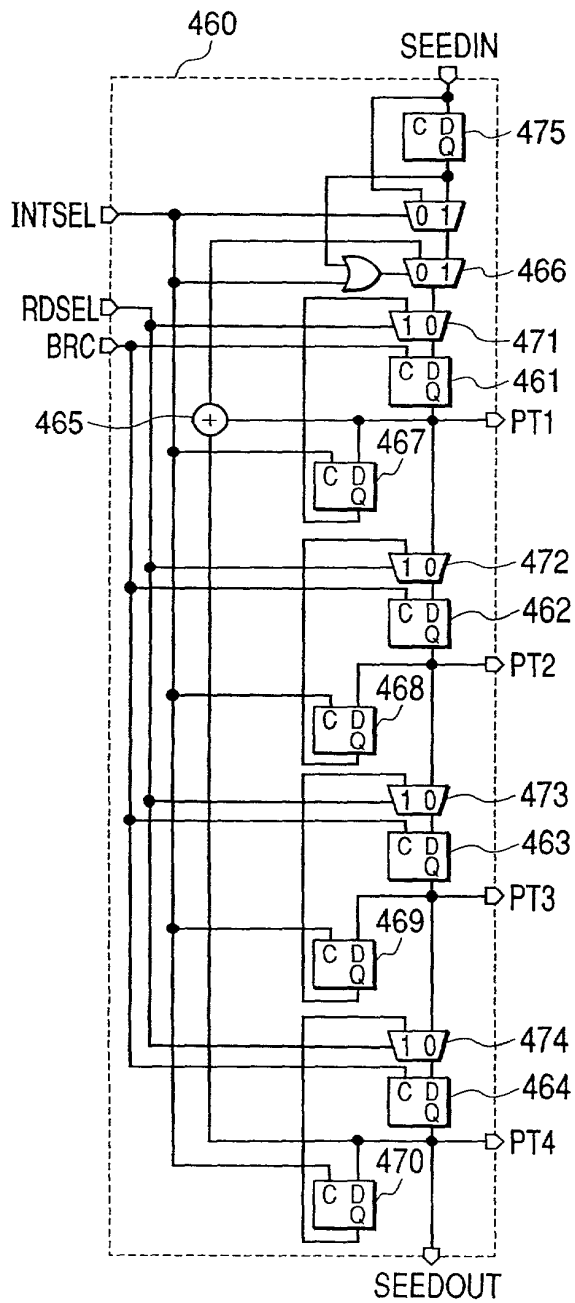


FIG. 8

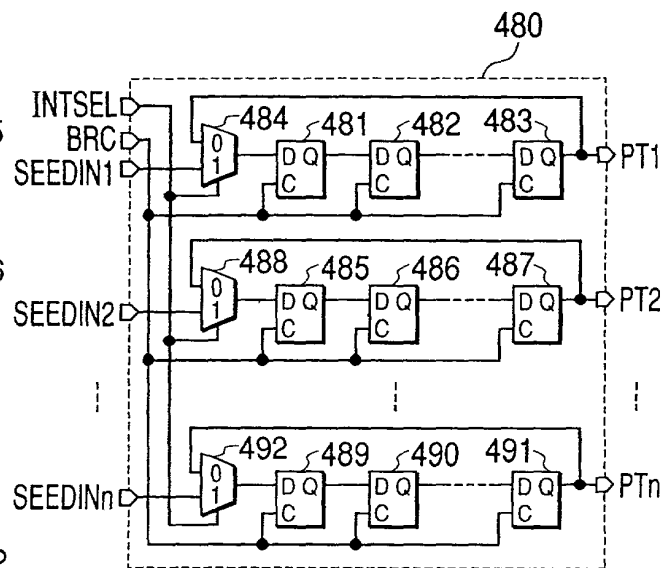


FIG. 9(a)

MODE	INTSEL	BRC	REGISTER
INITIALIZATION	1	┐↑	SHIFT
PATTERN GENERATION	0	┐↑	RANDOM

FIG. 9(b)

MODE	INTSEL	RDSEL	BRC	REGISTER	SEED BACKUP REGISTER
INITIALIZATION	1	0	┐↑	SHIFT	SEED COPY
PATTERN GENERATION	0	0	┐↑	RANDOM	HOLD
SEED RECOVERY	0	1	┐↑	RECOVERY	HOLD
SEED UPDATE	1	0	—	—	SEED COPY

FIG. 9(c)

MODE	INTSEL	RDSEL	BRC	REGISTER	SEED BACKUP REGISTER
INITIALIZATION	1	0	┐↑	SHIFT	SEED COPY
PATTERN GENERATION	0	0	┐↑	RANDOM	HOLD
SEED RECOVERY	—	1	┐↑	RECOVERY	HOLD

FIG. 10

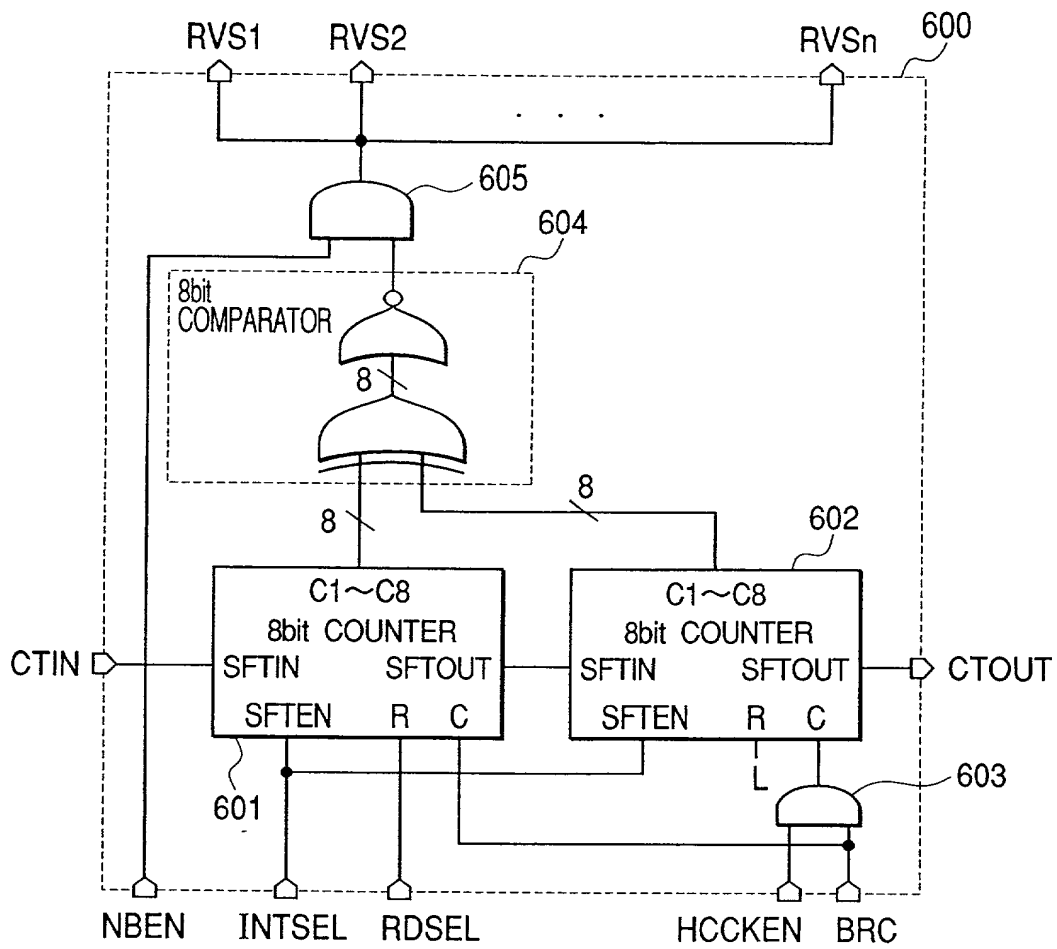


FIG. 11

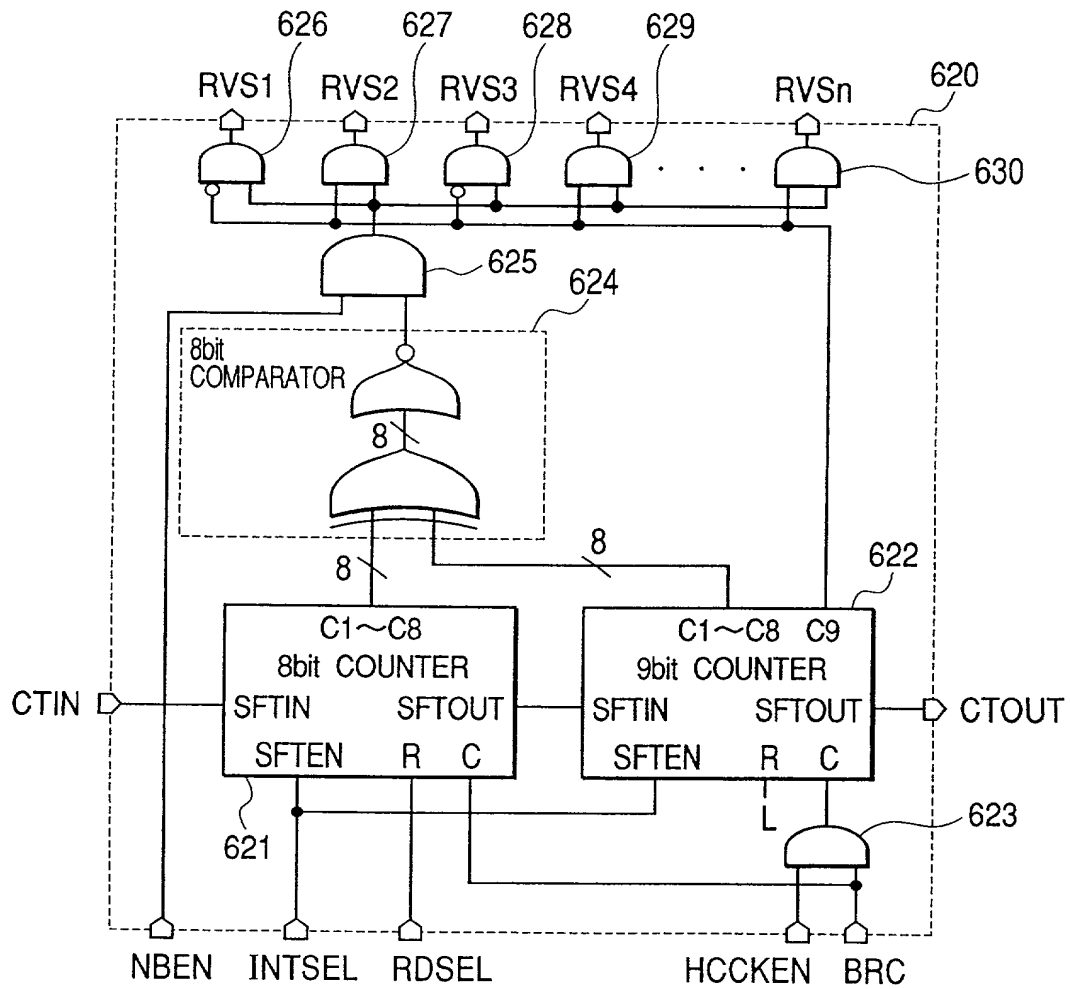


FIG. 12

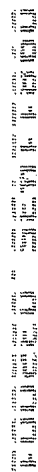


FIG. 13

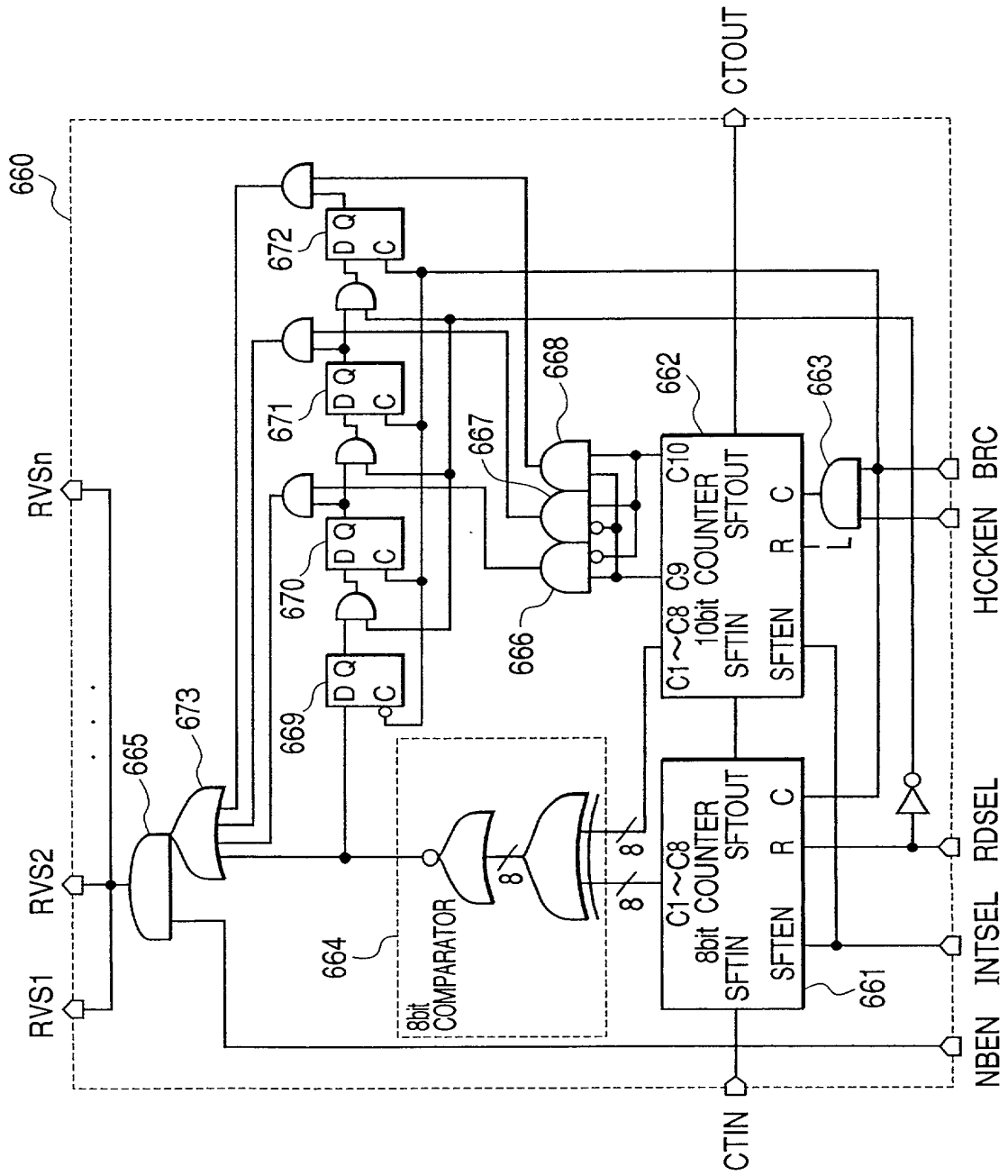


FIG. 14(a)

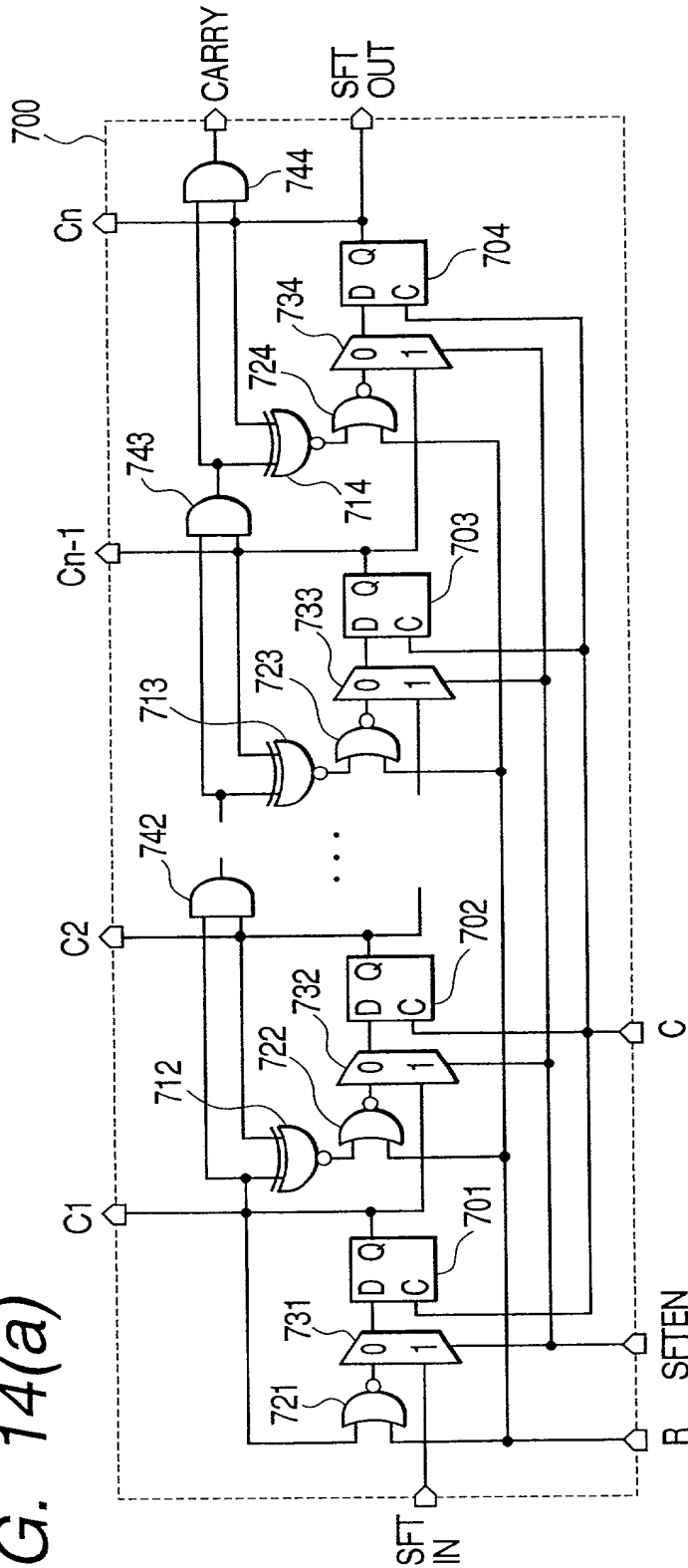


FIG. 14(b)

MODE	SFTEN	R	C
SHIFT	1	0	\uparrow
RESET	0	1	\uparrow
INCREMENT	0	0	\uparrow

FIG. 15(a)

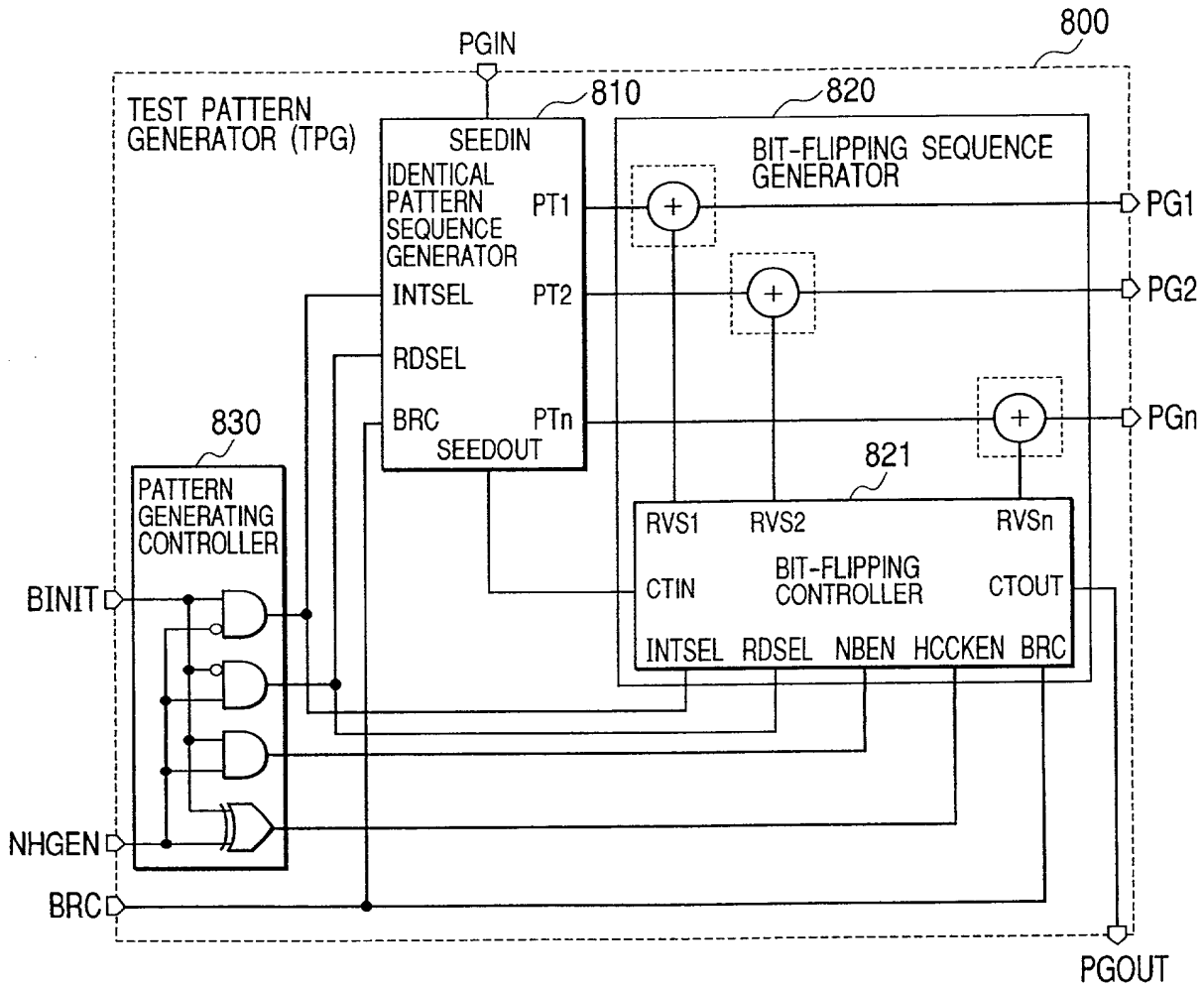


FIG. 15(b)

	MODE	BINIT	NHGEN	INTSEL	RDSEL	NBEN	HCCKEN
841	INITIALIZATION	1	0	1	0	0	1
842	PATTERN GENERATION	0	0	0	0	0	0
843	SEED RECOVERY	0	1	0	1	0	1
844	NEIGHBORHOOD PATTERN GENERATION	1	1	0	0	1	0

FIG. 17

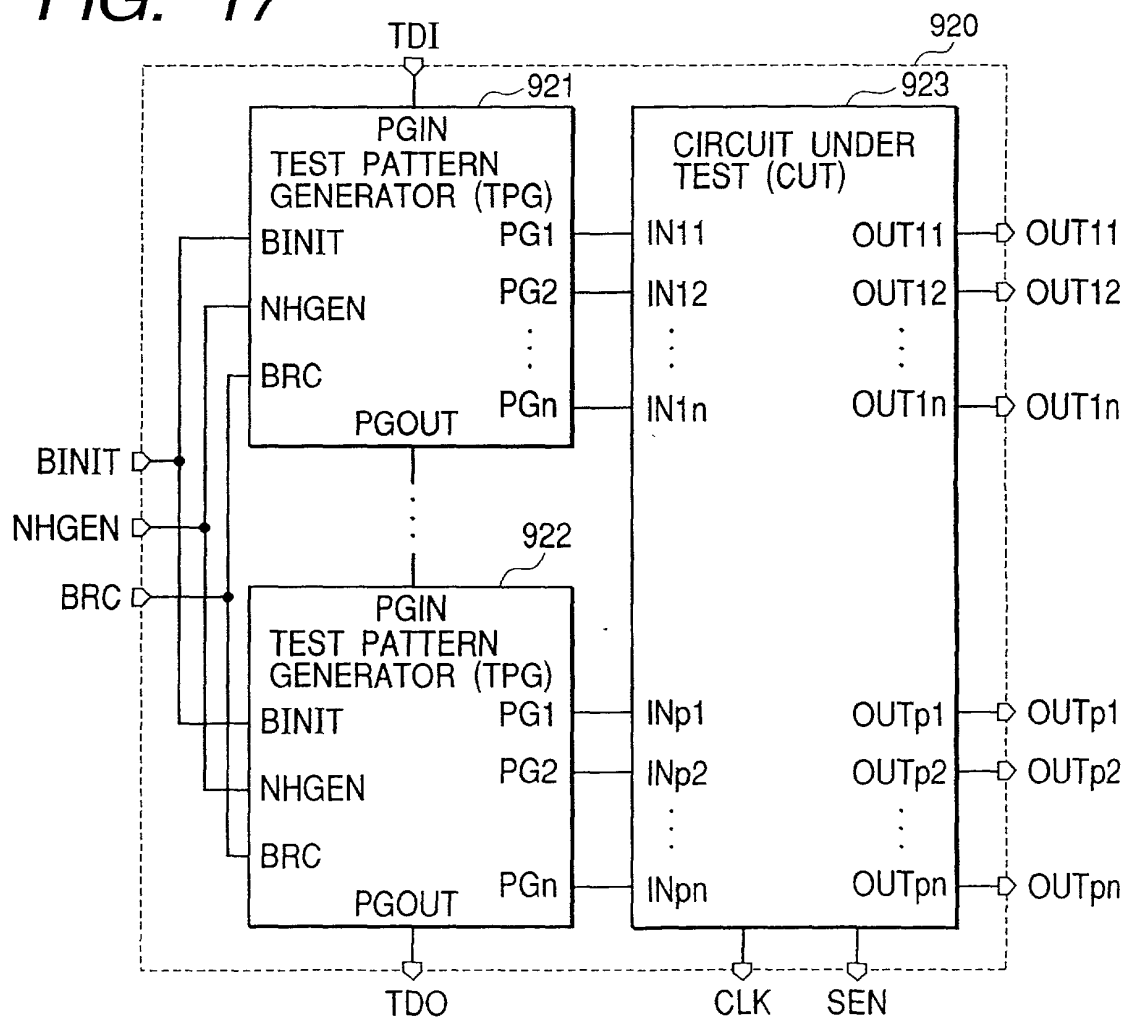


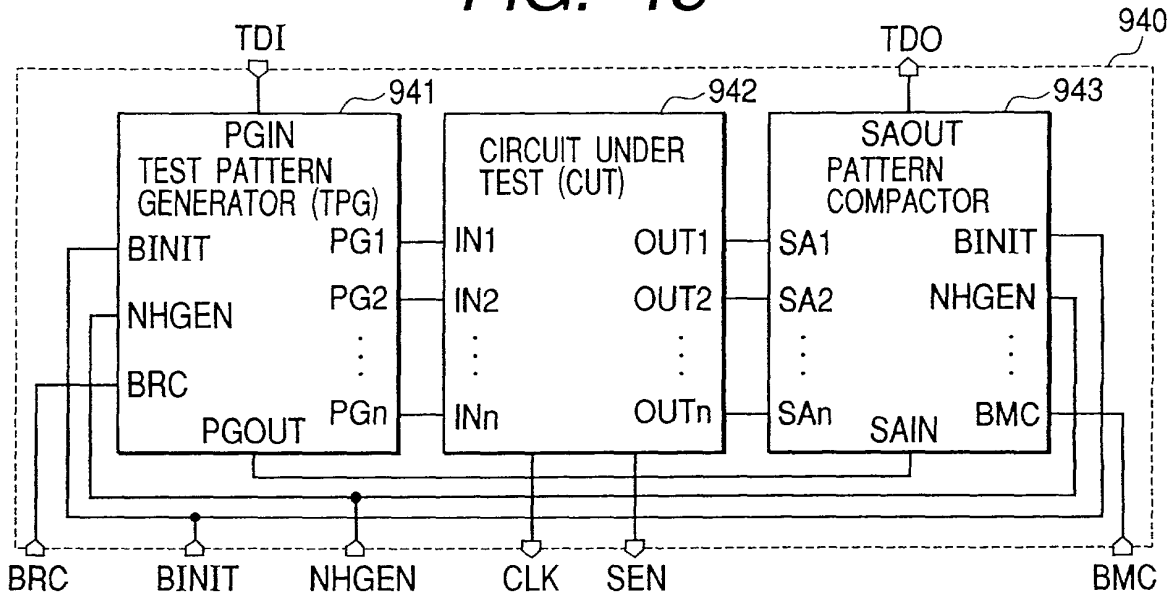
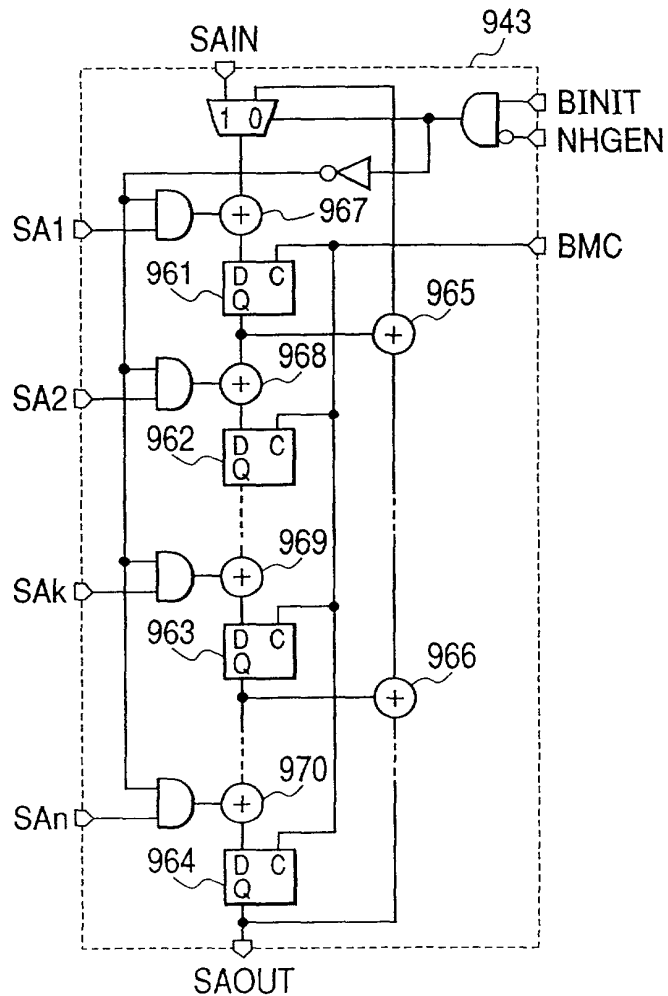
FIG. 18**FIG. 19**

FIG. 20

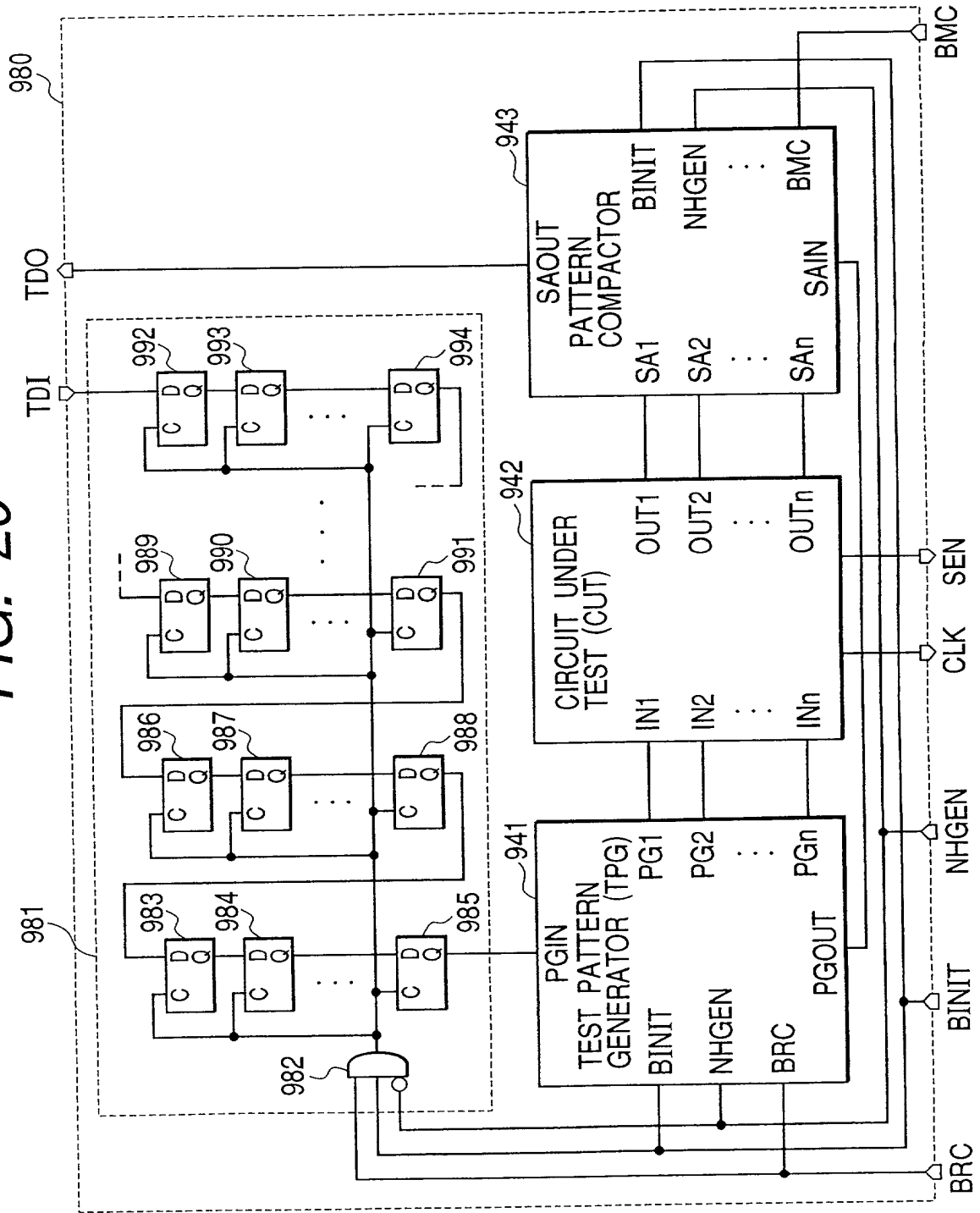


FIG. 21

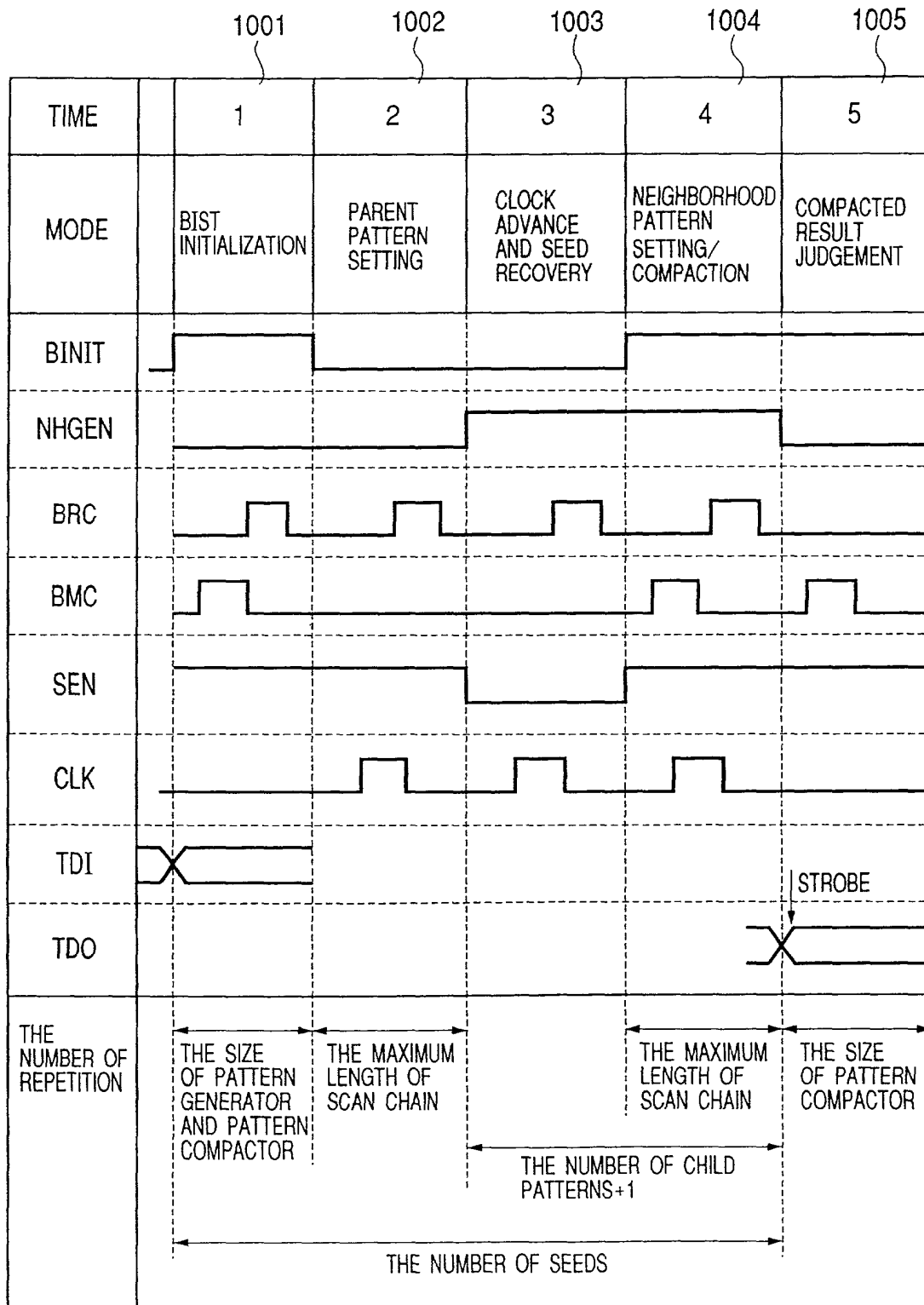


FIG. 22

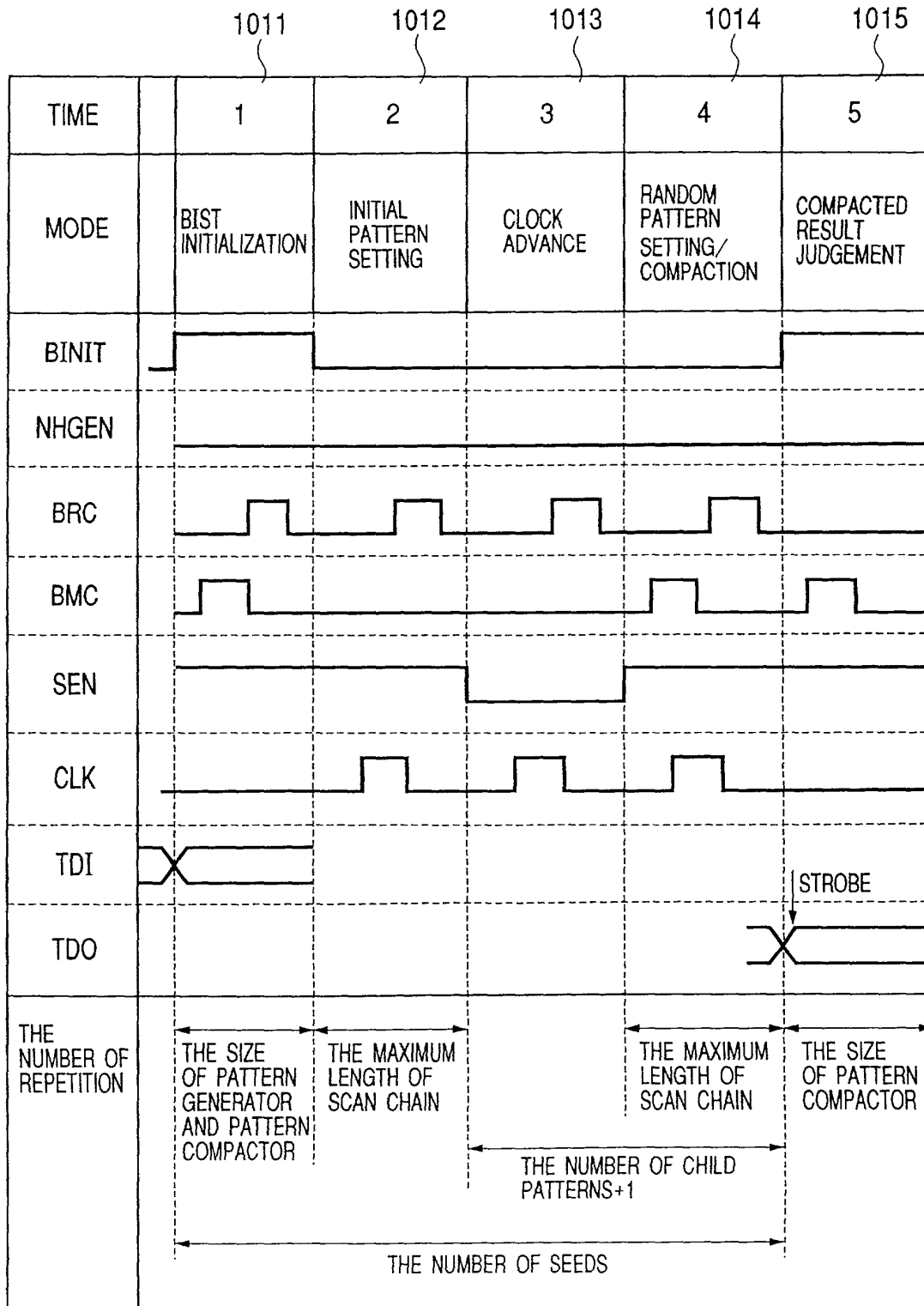


FIG. 23

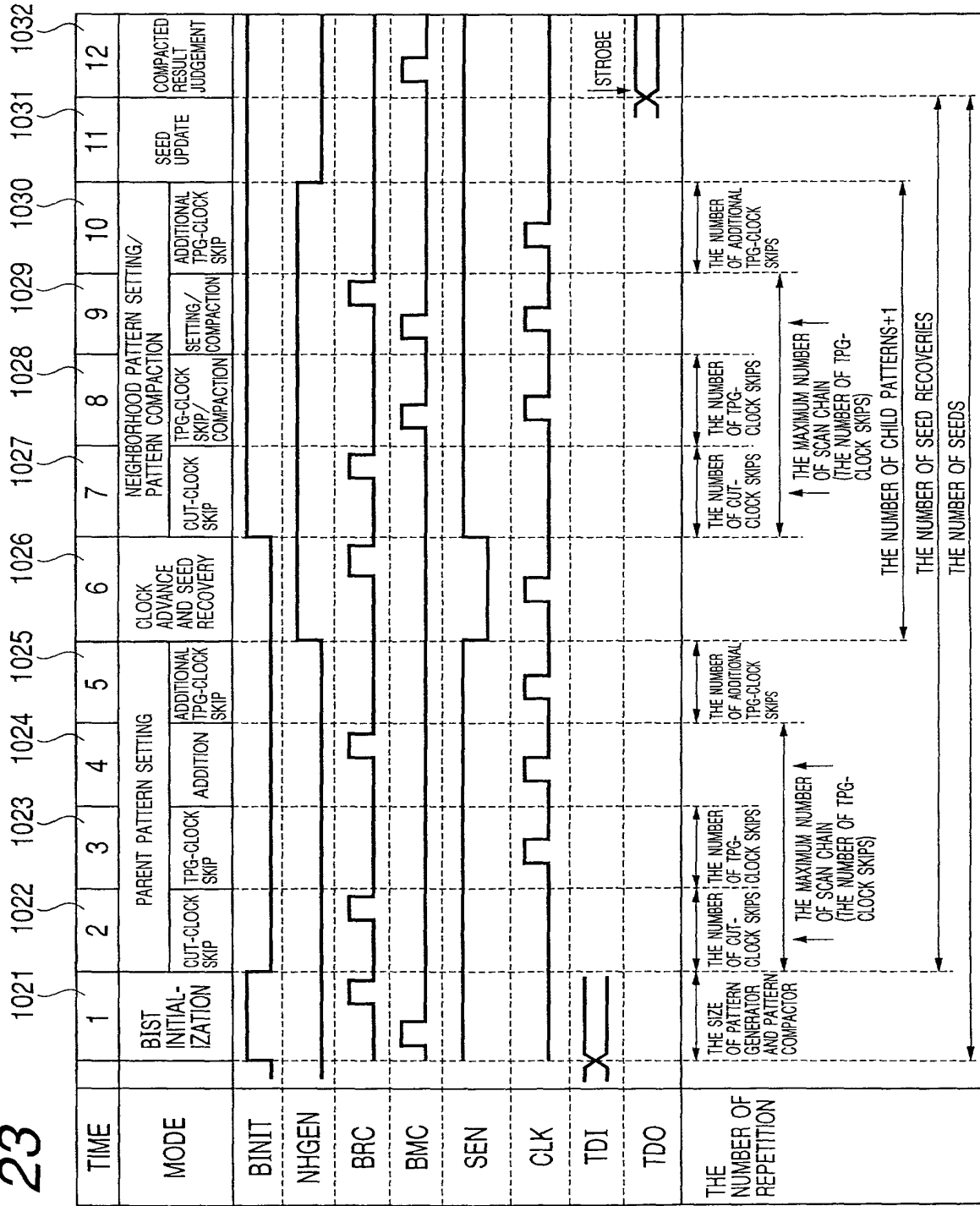


FIG. 24

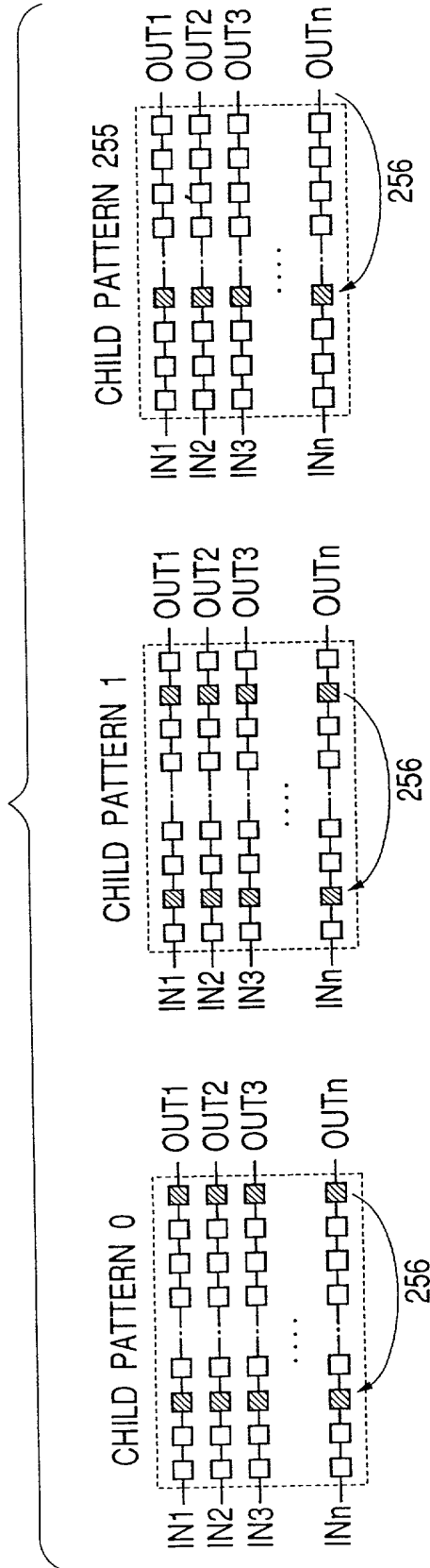


FIG. 25

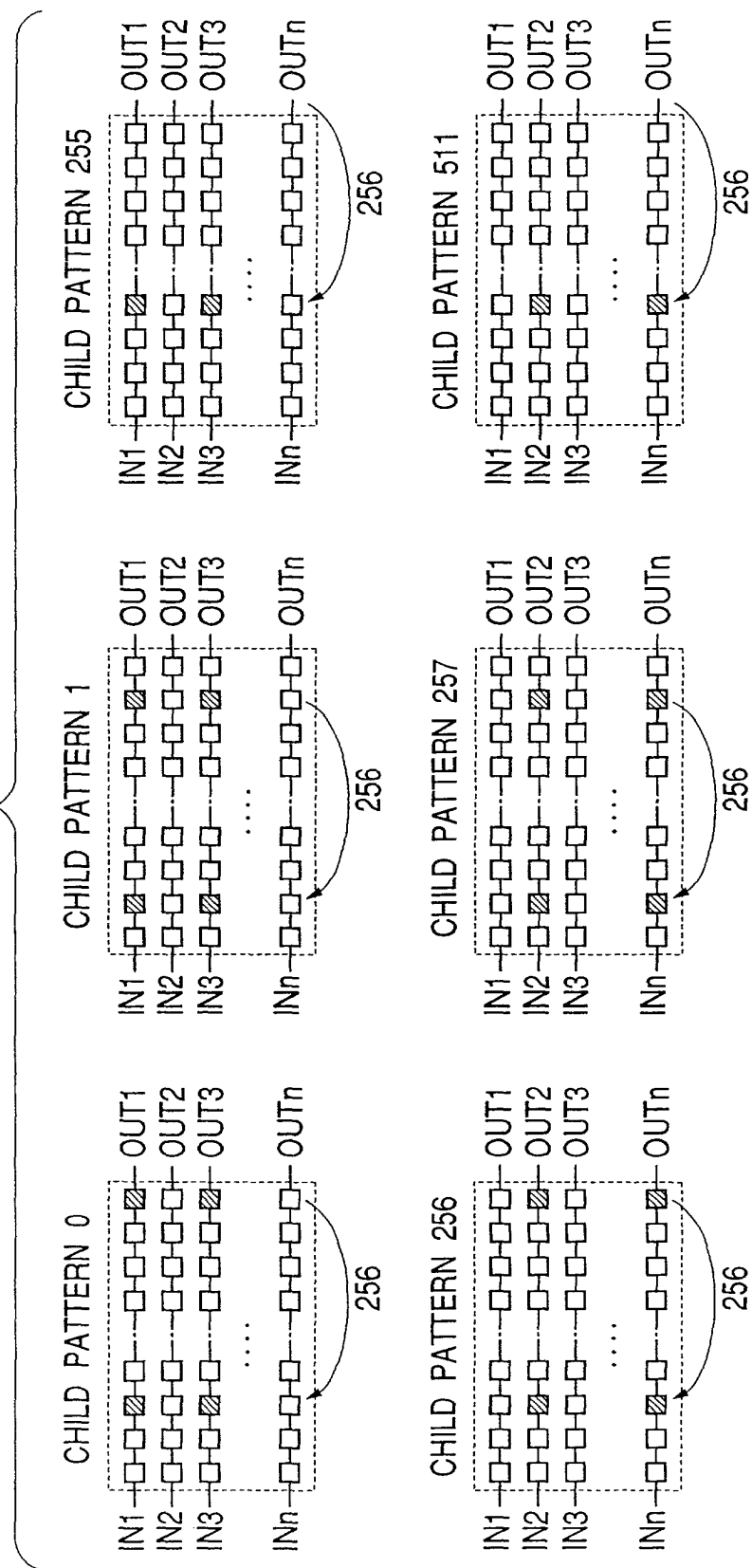


FIG. 26

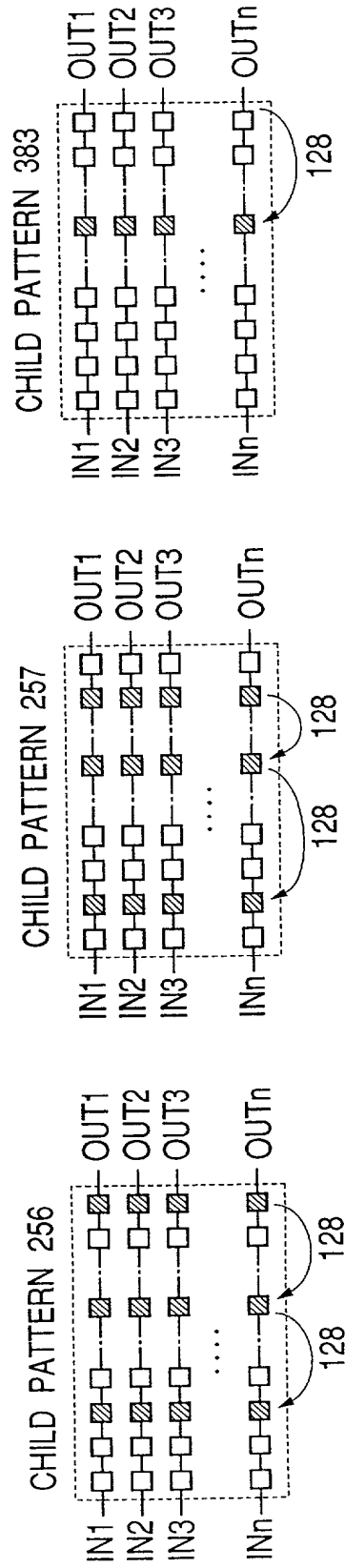


FIG. 27

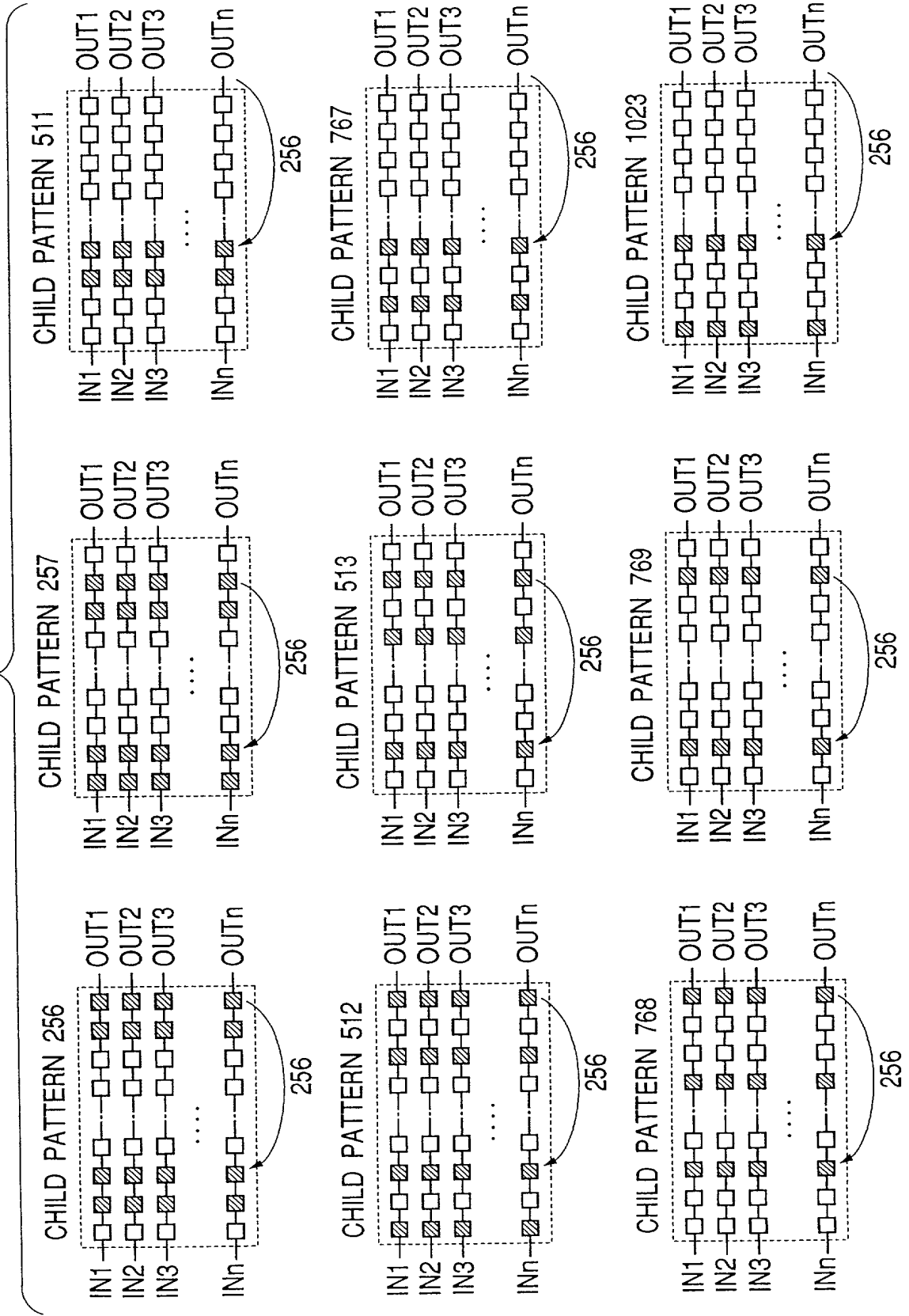


FIG. 29

TIME	MODE	BI NIT	NH GEN	BRC	SEN	CLK	TDI	FBI EN	PG1	PG2	PG3	PG4	LC1	LC2	LC3	HC1	HC2	HC3	
0	INITIALIZATION	0	0	0	1	0	1	X	X	X	X	X	X	X	X	X	X	X	
1		1	0	P	1	0	1	1	X	X	X	X	X	X	X	X	X	X	
2		1	0	P	1	0	1	1	1	X	X	X	X	X	X	X	X	X	
3		1	0	P	1	0	0	1	1	1	X	X	X	X	X	X	X	X	
4		1	0	P	1	0	0	0	1	1	1	X	X	X	X	X	X	X	
5		1	0	P	1	0	0	0	0	1	1	1	X	X	X	X	X	X	
6		1	0	P	1	0	1	0	0	0	1	1	1	X	X	X	X	X	
7		1	0	P	1	0	1	1	0	0	0	1	1	1	X	X	X	X	
8		1	0	P	1	0	1	1	1	0	0	0	0	1	1	1	X	X	X
9		1	0	P	1	0	1	1	1	1	0	0	0	0	1	1	1	X	X
10		1	0	P	1	0	0	1	1	1	1	1	0	0	0	1	1	1	X
11	1	0	P	1	0	X	0	0	1	1	1	1	0	0	0	1	1	1	
12	PARENT PATTERN SETTING	0	0	P	1	P	X	0	1	1	1	1	1	0	0	0	1	1	1
13		0	0	P	1	P	X	0	1	1	1	1	1	0	1	0	1	1	1
14		0	0	P	1	P	X	0	1	1	1	1	1	1	1	0	1	1	1
15		0	0	P	1	P	X	0	1	1	1	1	1	0	0	1	1	1	1
16		0	0	P	1	P	X	0	1	1	1	1	1	1	0	1	1	1	1
17		0	0	P	1	P	X	0	1	1	1	1	1	0	1	1	1	1	1
18		0	0	P	1	P	X	0	1	1	1	1	1	1	1	1	1	1	1
19		0	0	P	1	P	X	0	1	1	1	1	1	0	0	0	1	1	1
20	CLOCK ADVANCE	0	1	P	0	P	X	0	1	1	1	1	0	0	0	0	0	0	
21	CHILD PATTERN 0 SETTING (RESULT OF PARENT PATTERN)	1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	0	0	0
22		1	1	P	1	P	X	0	1	1	1	1	1	0	1	0	0	0	0
23		1	1	P	1	P	X	0	1	1	1	1	1	1	1	0	0	0	0
24		1	1	P	1	P	X	0	1	1	1	1	1	0	0	1	0	0	0
25		1	1	P	1	P	X	0	1	1	1	1	1	1	0	1	0	0	0
26		1	1	P	1	P	X	0	1	1	1	1	1	0	1	1	0	0	0
27		1	1	P	1	P	X	0	1	1	1	1	1	1	1	1	0	0	0
28		1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	0	0	0
29	CLOCK ADVANCE	0	1	P	1	P	X	0	1	1	1	1	0	0	0	1	0	0	
30	CHILD PATTERN 1 SETTING (RESULT OF CHILD PATTERN 0)	1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	1	0	0
31		1	1	P	1	P	X	0	1	1	1	1	1	0	1	0	1	0	0
32		1	1	P	1	P	X	0	1	1	1	1	1	1	1	0	1	0	0
33		1	1	P	1	P	X	0	1	1	1	1	1	0	0	1	1	0	0
34		1	1	P	1	P	X	0	1	1	1	1	1	1	0	1	1	0	0
35		1	1	P	1	P	X	0	1	1	1	1	1	0	1	1	1	0	0
36		1	1	P	1	P	X	0	1	1	1	1	1	1	1	1	1	0	0
37		1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	1	0	0
38	CLOCK ADVANCE	0	1	P	1	P	X	0	1	1	1	1	0	0	0	0	1	0	
83	CLOCK ADVANCE	0	1	P	1	P	X	0	1	1	1	1	0	0	0	1	1	1	
84	CHILD PATTERN 7 SETTING (RESULT OF CHILD PATTERN 6)	1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	1	1	1
85		1	1	P	1	P	X	0	1	1	1	1	1	0	1	0	1	1	1
86		1	1	P	1	P	X	0	1	1	1	1	1	1	1	0	1	1	1
87		1	1	P	1	P	X	0	1	1	1	1	1	0	0	1	1	1	1
88		1	1	P	1	P	X	0	1	1	1	1	1	1	0	1	1	1	1
89		1	1	P	1	P	X	0	1	1	1	1	1	0	1	1	1	1	1
90		1	1	P	1	P	X	0	1	1	1	1	1	1	1	1	1	1	1
91		1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	1	1	1
92	CLOCK ADVANCE	0	1	P	1	P	X	0	1	1	1	1	0	0	0	0	0	0	
93	RESULT OF CHILD PATTERN	1	1	P	1	P	X	0	1	1	1	1	1	0	0	0	0	0	0
94		1	1	P	1	P	X	0	1	1	1	1	1	0	1	0	0	0	0
95		1	1	P	1	P	X	0	1	1	1	1	1	1	1	0	0	0	0
96		1	1	P	1	P	X	0	1	1	1	1	1	0	0	1	0	0	0
97		1	1	P	1	P	X	0	1	1	1	1	1	1	0	1	0	0	0
98		1	1	P	1	P	X	0	1	1	1	1	1	0	1	1	0	0	0
99		1	1	P	1	P	X	0	1	1	1	1	1	1	1	1	0	0	0
100		1	1	P	1	P	X	0	1	1	1	1	1	1	1	1	0	0	0

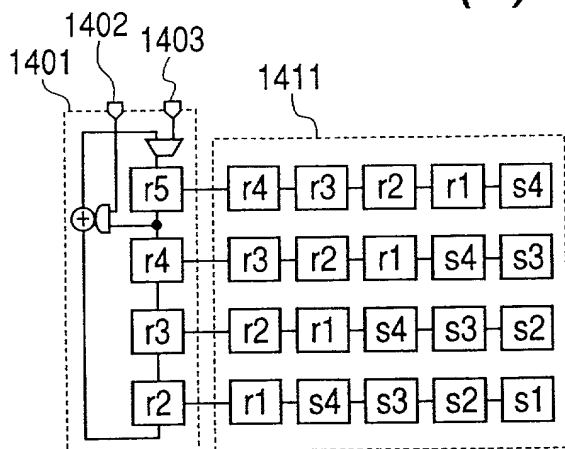
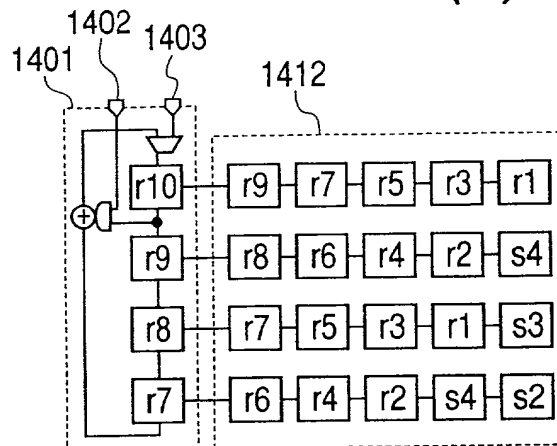
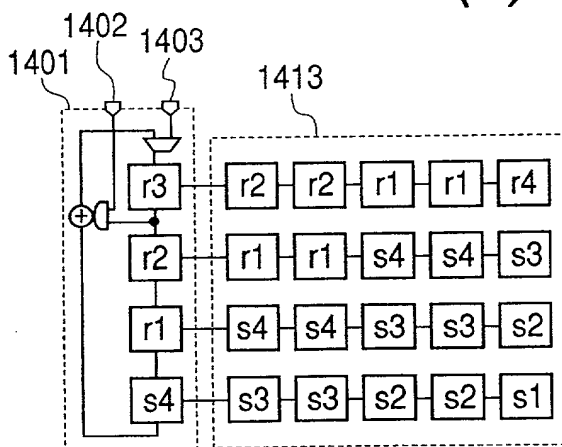
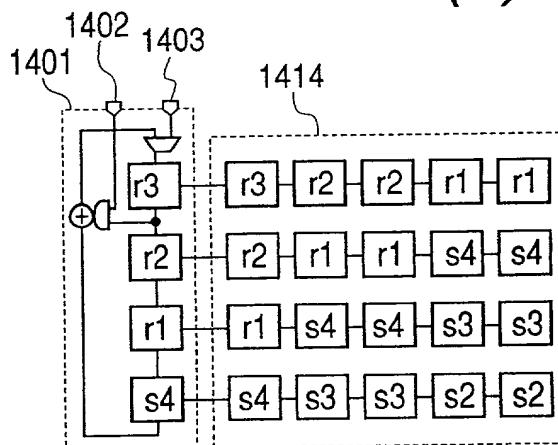
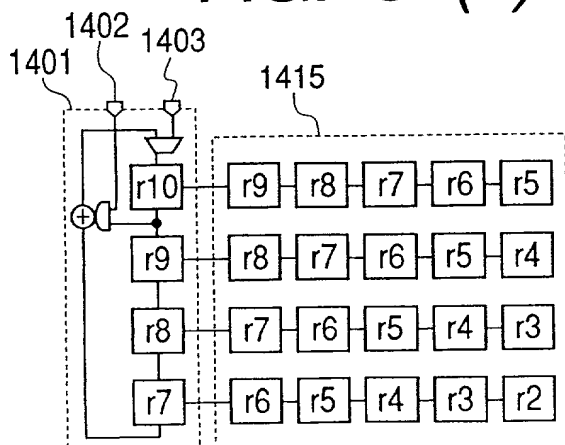
FIG. 31(a)*FIG. 31(b)**FIG. 31(c)**FIG. 31(d)**FIG. 31(e)*

FIG. 32(a)

FIG. 32(b)

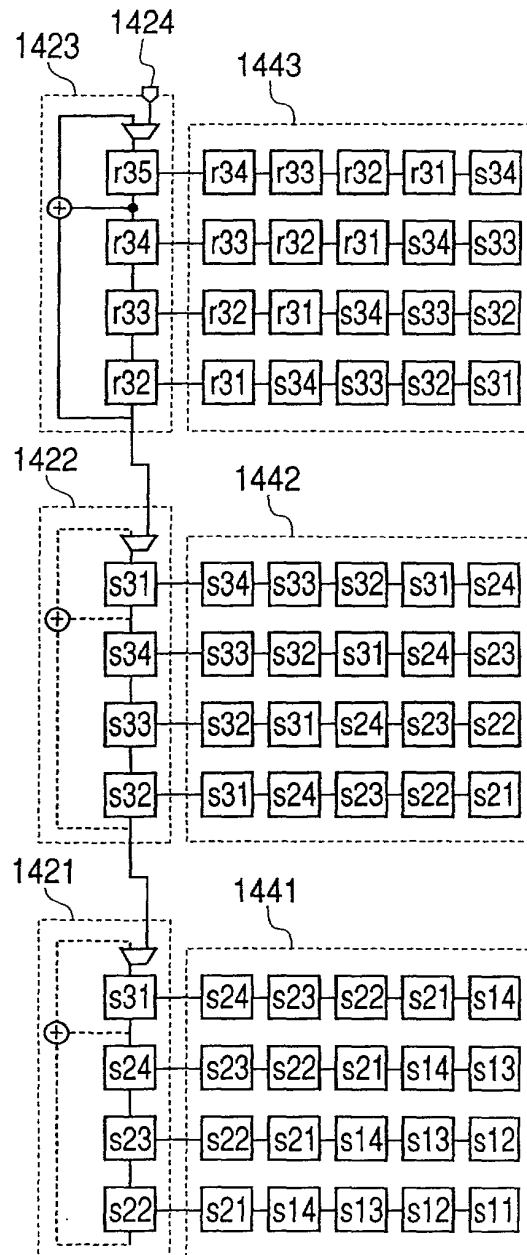
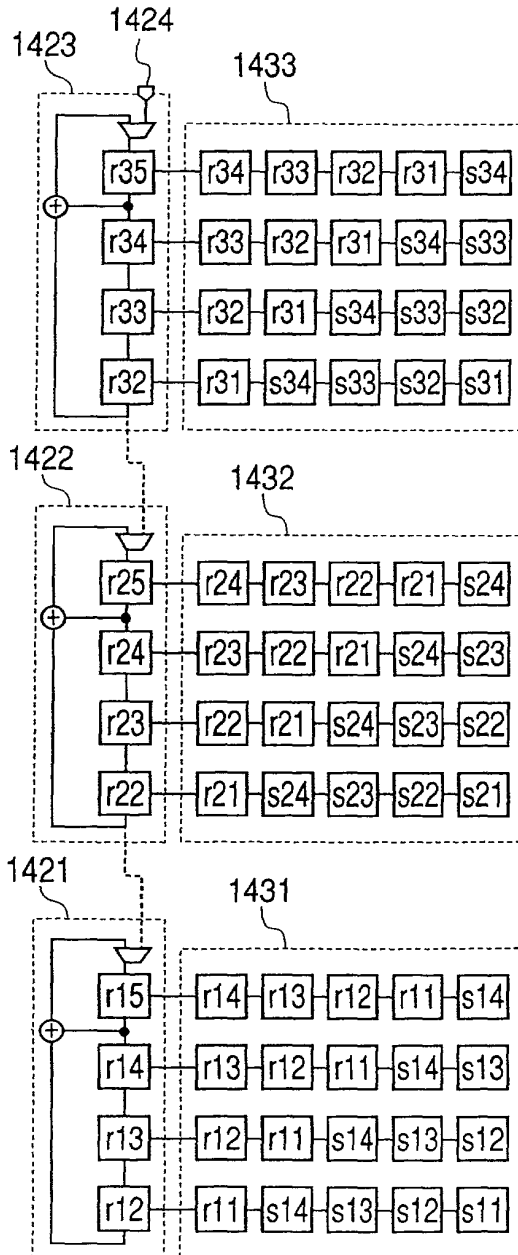


FIG. 33

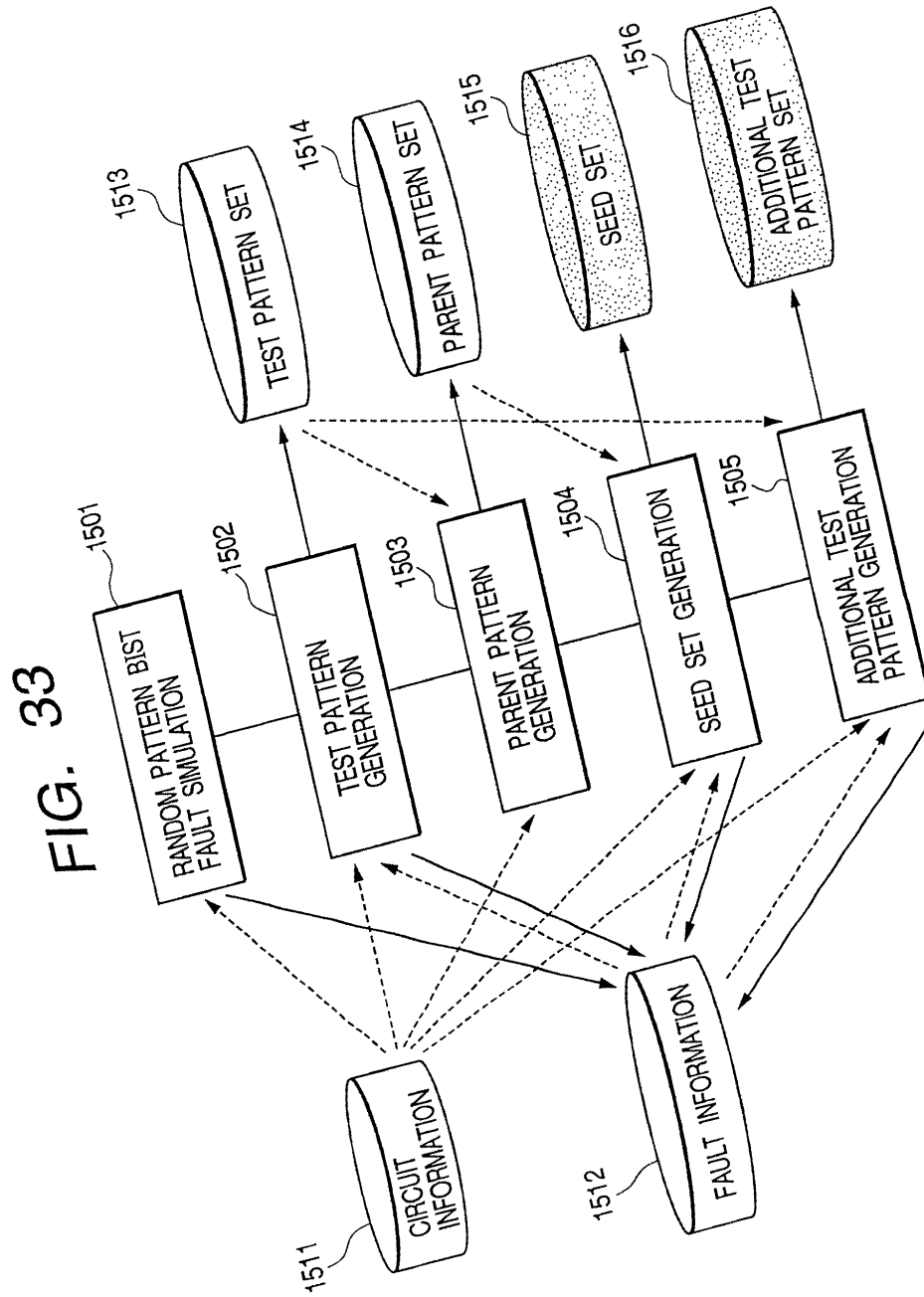


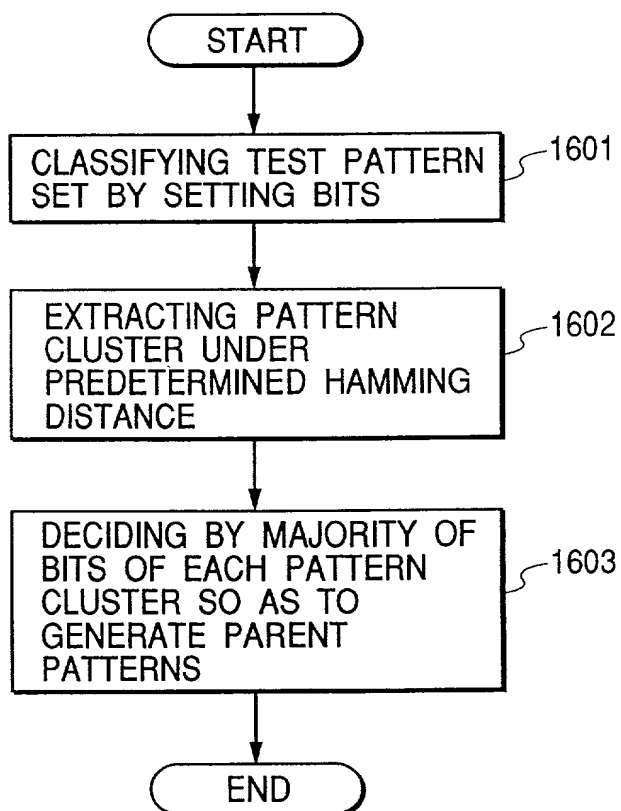
FIG. 34

FIG. 35

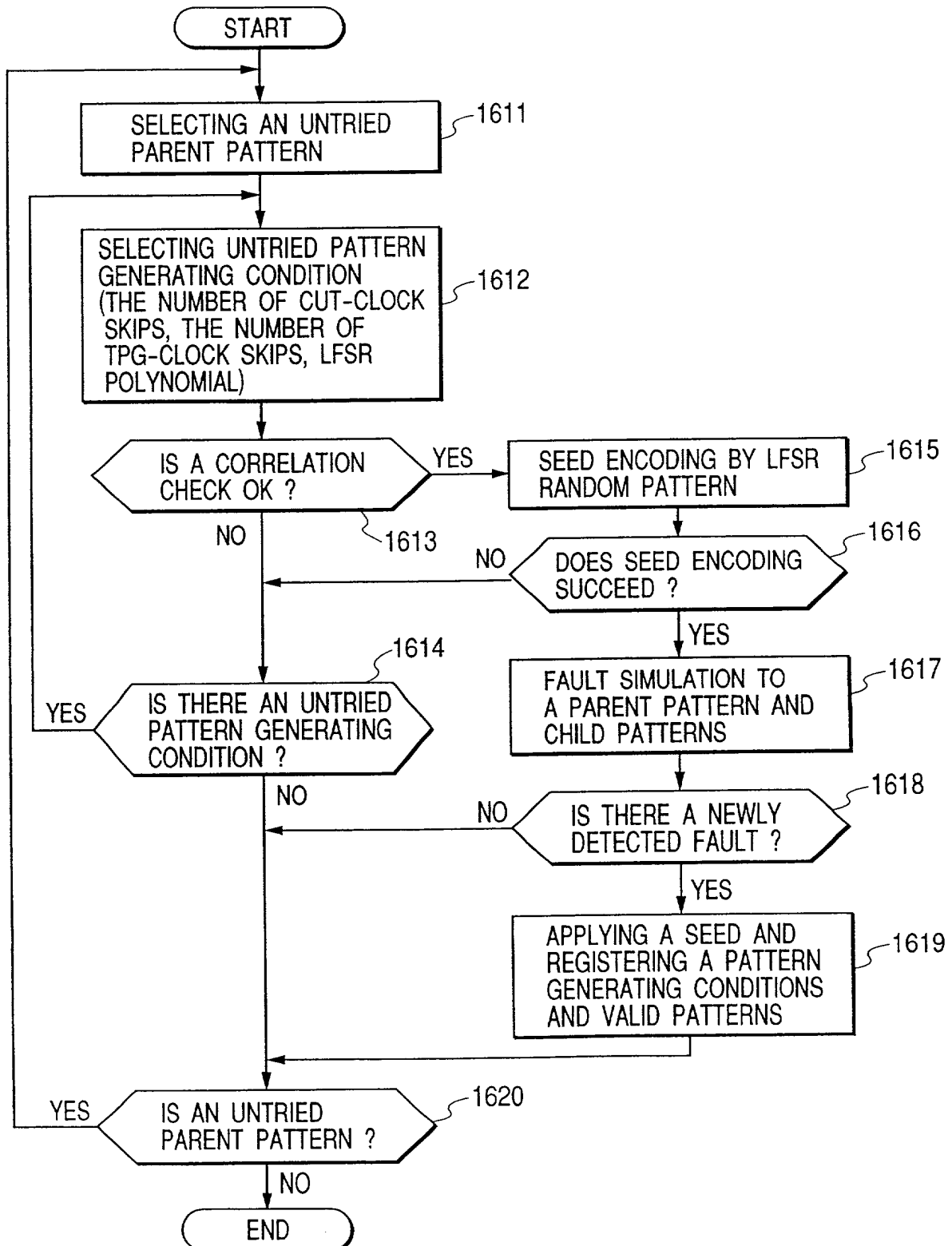


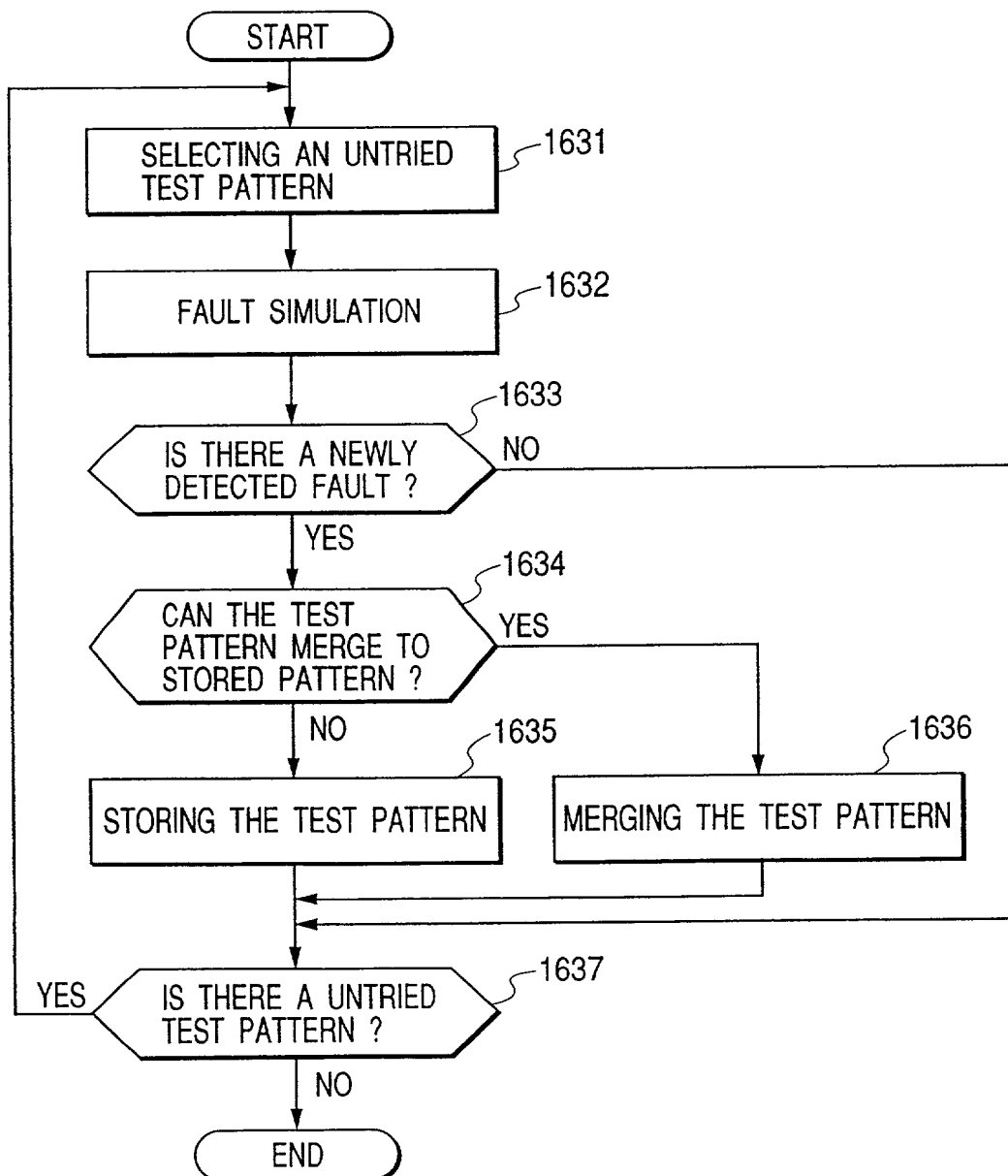
FIG. 36

FIG. 37

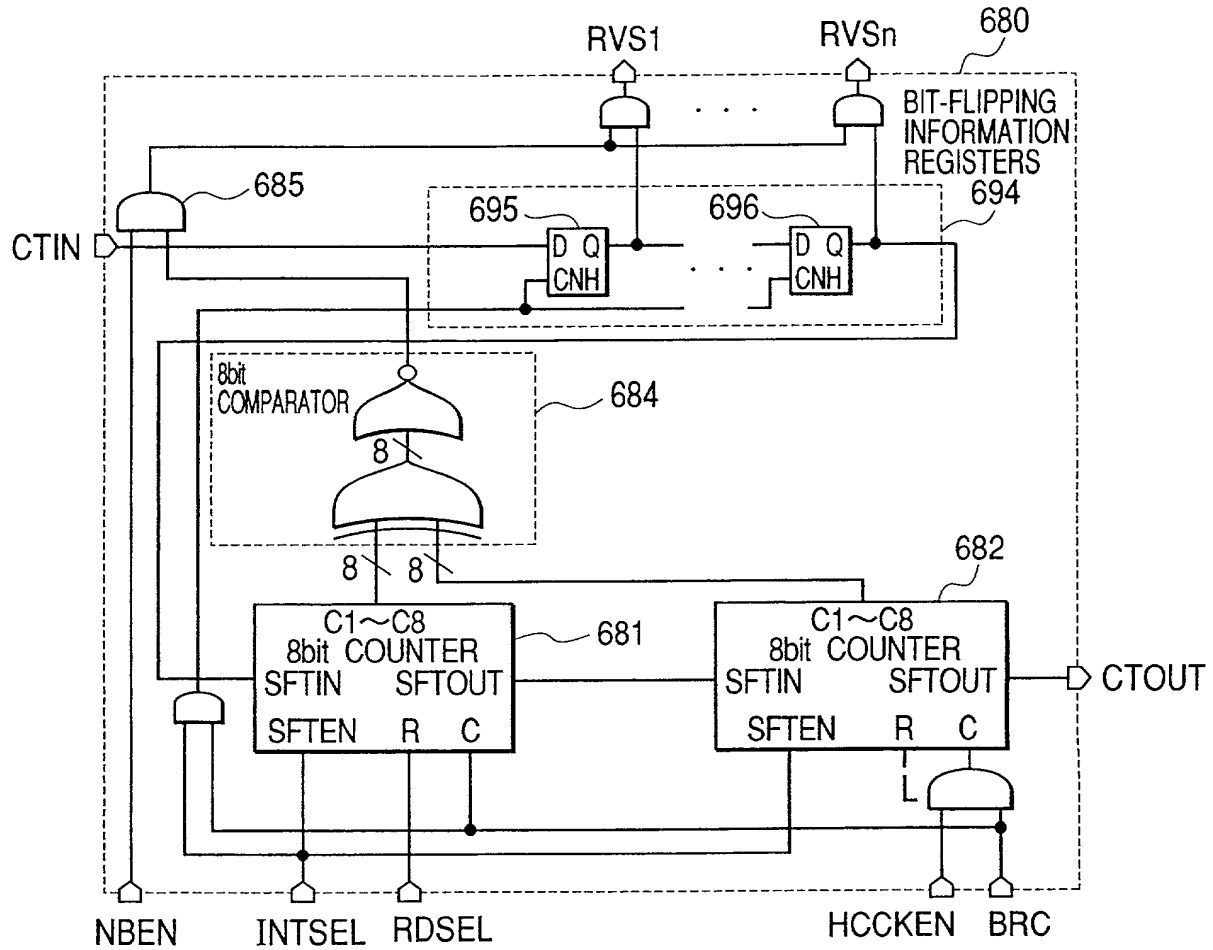


FIG. 38

